

**CLAIMS**

**What is claimed is:**

1. A radio receiver apparatus in receipt of a spread spectrum radio signal having a first signal tracking channel and a second signal tracking channel, comprising:
  - a demodulator that demodulates a first signal in the spread spectrum radio signal into the first signal tracking channel and a second signal in the spread spectrum radio signal into the second signal tracking channel;
  - a crosscorrelator connected to the first tracking channel and the second tracking channel;
  - a signal processor that identify a carrier wave jamming signal with the crosscorrelator;
  - a tracker that tracks the carrier wave jamming signal; and
  - a signal canceller subtracts the carrier wave jamming signal from the spread spectrum signal.
2. The radio receiver apparatus of claim 1, where the signal canceller further including:
  - a signal generator that generates a replica carrier wave jamming signal having a phase from the carrier wave jamming signal having another phase and subtracts the replica carrier wave jamming signal from the spread spectrum signal to cancel the carrier wave jamming signal.
3. The radio receiver apparatus of claim 2, further includes:
  - a signal rotator that rotates the phase of the replica carrier wave jamming signal.

4. The radio receiver apparatus of claim 3, where the signal rotator adjusts the phase of the replica carrier wave jamming signal to match the other phase of the carrier wave jamming signal in the spread spectrum signal.
5. The radio receiver apparatus of claim 1, where the crosscorrelator has a code of all ones for a pseudo random number (PRN) code.
6. The radio receiver apparatus of claim 1, wherein the spread spectrum radio signal is a position signal.
7. The radio receiver apparatus of claim 1, wherein the crosscorrelator is at least a 1024 bit wide correlator.
8. The radio receiver apparatus of claim 7, where the crosscorrelator further includes: an at least a 1024 bit wide match filter.
9. A method of removing a carrier wave jamming signal from a spread spectrum signal having a first signal tracking channel and a second signal tracking channel, comprising:  
demodulating a first signal in the spread spectrum radio signal into the first signal tracking channel and a second signal in the spread spectrum radio signal into the second signal tracking channel;

correlating the first tracking channel and the second tracking channel with a crosscorrelator;

computating a product of the first signal tracking channel and the second signal tracking channel to obtain a carrier wave jamming signal;

tracking the carrier wave jamming signal; and

canceling the carrier wave jamming signal from the spread spectrum signal.

10. The method of claim 9, where canceling further includes:

generating a replica carrier wave jamming signal having a phase from the carrier wave jamming signal having another phase; and

subtracting the replica carrier wave jamming signal from the spread spectrum signal to cancel the carrier wave jamming signal.

11. The method of claim 10, further includes:

rotating the phase of the replica carrier wave jamming signal.

12. The method of claim 11, further includes:

adjusting the phase of the replica carrier wave jamming signal to match the other phase of the carrier wave jamming signal in the spread spectrum signal.

13. The method of claim 9, further includes:

configuring the crosscorrelator with a code of all ones for a pseudo random number (PRN) code.

14. The method of claim 9, wherein the spread spectrum radio signal is a position signal.
15. The method of claim 9, wherein the crosscorrelator is at least a 1024 bit wide correlator.
16. The method of claim 15, where the crosscorrelator further includes:  
filtering with an at least a 1024 bit wide match filter.
17. A receiver in receipt of a spread spectrum radio signal having a first signal tracking channel and a second signal tracking channel, comprising:  
demodulation means for demodulating a first signal in the spread spectrum radio signal into the first signal tracking channel and a second signal in the spread spectrum radio signal into the second signal tracking channel;  
correlation means for correlating the first tracking channel and the second tracking channel;  
computation means for computing a product of the first signal tracking channel and the second signal tracking channel to obtain a carrier wave jamming signal;  
means for tracking the carrier wave jamming signal; and  
canceling means that cancels the carrier wave jamming signal from the spread spectrum signal.

18. The receiver of claim 17, where cancellation means further includes:
  - generating means for generation of a replica carrier wave jamming signal having a phase from the carrier wave jamming signal having another phase; and
  - subtracting means for subtraction of the replica carrier wave jamming signal from the spread spectrum signal to cancel the carrier wave jamming signal.
19. The receiver of claim 18, further includes:
  - means for rotating the phase of the replica carrier wave jamming signal.
20. The receiver of claim 19, further includes:
  - means for adjusting the phase of the replica carrier wave jamming signal to match the other phase of the carrier wave jamming signal in the spread spectrum signal.
21. The receiver of claim 17, further includes:
  - means for configuring the correlation means with a code of all ones for a pseudo random number (PRN) code.
22. The radio receiver apparatus of claim 17, wherein the spread spectrum radio signal is a positioning signal.
23. The radio receiver apparatus of claim 9, wherein the correlation means is at least a 1024 bit wide correlator.

24. The radio receiver apparatus of claim 23, where the correlation means further includes:  
an at least a 1024 bit wide match filter.